

ABSTRACT

The flow of a fluid at low flow rates is measured in a flow sensing assembly and controlled without introducing measuring devices into the fluid flow path. The flow sensing assembly is enclosed in a housing to lessen ambient and fluid temperature change effects on the measurements obtained. As the fluid is flowing through tubing in the flow sensing assembly, the tubing is heated to impart heat to the fluid. Heat sensors are attached at spaced positions from each other along the tubing in the direction of fluid flow to sense temperatures. The amount of heat applied to the tubing is controlled to maintain an established temperature differential between the heat sensors. The amount of heat applied is measured to provide an accurate and proportional indication of the fluid flow rate.